

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for minimizing precipitation of developing reactant by lowering a sudden change in pH, said method comprising:

providing a laminar airflow field in a developer fluid module in which a substrate is located;  
applying a charge of developer fluid onto a polymer layer on a the substrate at a plurality of locations on the surface of the polymer layer;  
developing at least a portion of the polymer layer; then  
permitting at least a portion of said charge of developer fluid to dwell on said polymer so as to controllably minimize a subsequent sudden change in pH; and then  
rinsing said polymer with a charge of another fluid.

2. (Original) The method of claim 1, further comprising spinning said substrate at an angular velocity sufficient to remove a portion of said developer fluid from said substrate.

3. (Original) The method of claim 2, wherein spinning said substrate includes spinning said substrate at an angular velocity, and for a duration, sufficient to remove a majority of said developer fluid.

4. (Original) The method of claim 1, wherein developing at least said portion of said polymer on said substrate includes developing at least a portion of an exposed photoresist polymer on said substrate.

5. (Original) The method of claim 1, wherein developing at least said portion of said polymer on said substrate includes developing said at least a portion of said polymer on a semiconductor wafer substrate.

6. (Original) The method of claim 1, wherein rinsing said polymer with said charge of another fluid includes rinsing said polymer with deionized water.

7-43 (Canceled)

44. (Previously Presented) The method of claim 1, wherein the developer fluid and the other fluid for rinsing are applied with a low impinging force.

45. (Previously Presented) The method of claim 6, wherein the deionized water for rinsing is dispensed in a fine disbursement.

46-51 (Canceled)

52. (New) A method for minimizing precipitation of developing reactant by lowering a sudden change in pH, said method comprising:

providing a laminar airflow field in a developer fluid module in which a substrate is located.

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applying a charge of a first developer fluid onto a polymer layer on the substrate;  
developing at least a portion of the polymer layer;  
permitting at least a portion of the charge of the first developer fluid to dwell on said polymer so as to controllably minimize a subsequent sudden change in pH; and then rinsing said polymer with a charge of a rinse fluid having a fluid chemistry different than the first developer fluid.

53. (New) The method of claim 52, wherein developing at least said portion of said polymer on said substrate includes developing at least a portion of an exposed photoresist polymer on said substrate.

54. (New) The method of claim 52, wherein developing at least said portion of said polymer on said substrate includes developing said at least a portion of said polymer on a semiconductor wafer substrate.

55. (New) The method of claim 52, wherein rinsing said polymer with said charge of rinse fluid includes rinsing said polymer with deionized water.

56. (New) The method of claim 55, wherein the deionized water for rinsing is dispensed in a fine disbursement.

57. (New) The method of claim 52, further comprising rinsing said polymer with a charge of a second developer fluid before rinsing with a rinse fluid.

58. (New) The method of claim 57, wherein the charges of the first and second developer fluids onto the polymer layer are applied on a plurality of locations on the surface of the polymer layer.

59. (New) The method of claim 58, wherein the first and second developer fluids are applied with a low impinging force.

60. (New) A method for minimizing precipitation of developing reactant by lowering a sudden change in pH, said method comprising:

providing a laminar airflow field in a developer fluid module in which a substrate is located;

applying a charge of a first developer fluid onto a polymer layer on the substrate;

developing at least a portion of the polymer layer with the first developer fluid;

permitting at least a portion of said charge of developer fluid to dwell on said polymer so as to controllably minimize a subsequent sudden change in pH; then

rinsing said polymer with a charge of a second developer fluid; and then

rinsing said polymer with a charge of a rinse fluid having a fluid chemistry different than either the first or second developer fluids.

61. (New) The method of claim 60, wherein the first and second developer fluids, and the rinse fluid are applied with a low impinging force, so as to reduce damage to the patterned polymer layer.

62. (New) The method of claim 61, wherein the charge of the first and second developer fluids dispensed onto the polymer layer are applied at a plurality of locations on the surface of the polymer layer.

63. (New) The method of claim 61, wherein the rinse fluid dispensed onto the polymer layer is applied at a plurality of locations on the surface of the polymer layer.